

Sang Yup LEE et al.
Appln. No. 10/662,358
Amendment Under 37 CFR 1.116

REMARKS

Claims 6-14 are all the claims pending in the application. Claims 6-14 have been amended to more clearly and distinctly point out the claimed invention. No new matter has been introduced. Entry of the amendments is respectfully requested.

Applicant thank the Examiner to withdraw rejections under 35 U.S.C. §§ 102 and 103 raised in the previous office action.

Objection to Claims 6-14

Claims 6-14¹ have been objected to for using a noun “bacteria.” Claims 6-14 have been amended to rewrite the term to read “bacterium.” Therefore, the objection becomes moot.

Rejection of Claims 7 and 9-10 under 35 U.S.C. 112, second paragraph

Claim 7 has been rejected as the phrase “wherein said recombinant vector comprises PHA synthase gene” allegedly lacks an antecedent basis and broadens Claim 6, from which Claim 7 depends.

Applicants respectfully traverse the rejection, because the phrase “wherein said recombinant vector comprises PHA syntase gene” does not render Claim 7 indefinite or broadens Claim 6. Claim 6 recites that the claimed bacterium is transformed with a vector and comprises a polyhydroxyalkanoate (PHA) gene, Claim 7 further limits that the vector comprises the PHA gene.

¹ The Office Action indicates that Claims 1-14 were objected to. As Claims 1-15 were canceled in an Amendment in response to previous Office Action mailed June 2, 2005, it is believed that the phrase is a typo error of “Claims 6-14.”

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Nevertheless, to expedite the prosecution of the application, Applicants have amended Claim 7 by rewriting the phrase to read “the PHA synthase gene is carried by a vector.” Support for the amendment may be found at, for example, pages 9-12 of the specification, Examples 1-2 - 1-5.

Claims 9 and 10 have been rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office Action rejects the phrases “under conditions promoting production of MCL-PHA” in Claim 9 and “under conditions such that” in Claim 10.

Applicants have amended Claim 9, by rewriting the phrase to read “to produce MCL-PHA.” Applicants have also amended Claim 10, to read “in which 3-hydroxyoctanoate (3HO) monomers and 3-hydroxydecanoate (3HD) monomers in the MCL-PHA produced each account for more than 30% of monomers contained in the MCL-PHA produced.”

Therefore, the rejection is now moot by the amendments, and it is respectfully requested that the rejection be withdrawn.

Rejection of Claims 7, 9 and 10 under 35 U.S.C. § 112, first paragraph

Claims 7, 9 and 10 have been rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. In particular, the Office Action rejects the phrases “under conditions promoting production of MCL-PHA” in Claim 9 and “under conditions such that” in Claim 10, as allegedly introducing new matter.

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Applicants traverse the rejection. The present application describes the promoted production of MCL-PHA and the production of MCL-PHA having 3-hydroxyoctanoate (3HO) monomers and 3-hydroxydecanoate (3HD) monomers each in an amount more than 30% of monomers contained in the MCL-PHA.

Nevertheless, Applicants have amended Claims 9 and 10 as discussed above. The amendments to Claims 9 and 10 are believed to overcome the rejection, and it is respectfully requested that the rejection be withdrawn.

Rejection of Claims 6-14 under 35 U.S.C. § 112, first paragraph

Claims 6-14 have been rejected because they allegedly lack an adequate description and an enabling disclosure.

Applicants respectfully traverse the rejection for the following reasons. *E. coli* is a representative example of bacterium. At the time of the filing of the present application, genetic engineering technologies to produce foreign structural genes in various host cells including bacterium were well established. *E.g., see* Sambrook *et al.*, Molecular Cloning, 2nd ed. Cold Spring Harbor Laboratory Press, NY, 1989. Further, the specification lists several references describing the recombinant production of PHAs. *See* page 1. line 26 - p. 3, line 4.

Also, the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). A patent need not teach, and preferably omits, what is

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well known in the art. *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991).

Further, the subject matter of the claims need not be described literally in order for the disclosure to satisfy the description requirement. MPEP 2163.02. Possession may be shown in a variety of ways by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. *See, e.g., Pfaff v. Wells Elecs., Inc.* 525 U.S. 55, 68, 48 USPQ2d 1641, 1647 (1998). The specification of the present application clearly describes distinguishing identifying characteristics such as *MaoC* gene (SEQ ID NO:1) and *pha* gene.

Therefore, applicants submit that the present application, in combination with knowledge well known in the art at the time of filing, provides an adequate description and an enabling disclosure for Claims 6-14. It is respectfully requested that the rejection be withdrawn.

Premature Finality of the Office Action

Applicants note that most of the rejections under §112 of the Office Action could have been raised in an earlier office action. For example, §112, first paragraph rejections, which are introduced first time in the Office Action, are not necessitated by applicant's amendment, and thus, the finality of the rejection is premature. Therefore, Applicant respectfully request a reconsideration that the finality of the rejection be removed.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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